PROGRESS

OF

MEDICAL SCIENCE

MEDICINE

UNDER THE CHARGE OF

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On the Quantity of Glucose in the Blood in Health and Disease.—B. Purjesz (*Wien. klin. Woch.*, 1913, xxvi, 1420) has made a number of quantitative determinations of glucose in the blood in health and in various diseases. He finds that it varies between 0.0451 and 0.087 gm. per cent. in health, the blood being taken from the cubital vein in the morning, before food has been taken into the stomach. The normal variation is considerable, but, given like conditions in one and the same individual, there is little change in the quantity of sugar. Normally, the greater part of the blood sugar is in the plasma; only a trace is found in the erythrocytes. During febrile periods, the sugar in the red corpuscles may be increased. With increased activity of the thyroid gland, the quantity of glucose in the blood is small. Subcutaneous administration of the infundibular portion of the pituitary body in normal individuals increases the blood sugar. In Addison's disease, the sugar in the blood was found to be low. In the cases with hypertension examined, there was found a hyperglycemia. In pneumonia, fever was accompanied by hyperglycemia, though the latter was lacking in miliary tuberculosis and typhoid fever. Purjesz believes there is a fairly constant association of hyperglycemia with hypertension and fever.

Diabetes Insipidus and the Pituitary Gland.—M. Simmonds (*Münch. Med. Woch.*, 1913, lx, 127) reports an instructive case of diabetes insipidus. The patient, a woman of thirty-seven years of age, was operated on for cancer of the breast. She made a good recovery from the operation. The urine at this time averaged about 1500 c.c. daily, with specific gravity 1.012 to 1.015. Ten weeks after the operation, the patient returned to the clinic and reported that for two weeks she had had marked polyuria and increase thirst. The urine varied in amount between 10 and 19 liters, the specific gravity between 1.002 and 1.003; there was neither sugar nor albumin. The patient suffered from extensive metastases and finally died three months after the operation. Autopsy revealed metastases in the skin, breast, liver, cervical, pectoral, and abdominal lymphatic glands, pleura, and vertebræ. The kidneys were normal. The cerebrum, cerebellum, and medulla were also normal; there was no enlargement of the ventricles of the brain. The posterior aspect of the sella turcica felt soft, and so the entire sella and pituitary gland were removed *en masse*. After decalcification, sections were prepared. Microscopic examination showed a metastasis involving the bone and the adjacent posterior lobe of the pituitary body. As Schäfer has shown that the anterior lobe has no diuretic properties, Simmonds explains the polyuria through stimulation of the pars intermedia by the presence of the malignant growth in the posterior lobe, which had been completely destroyed.

Eosinophilia in Carcinomatosis and in Lymphogranuloma.—R. Strisower (*Wien. klin. Woch.*, 1913, xxvi, 16) reports an eosinophilia which at one time amounted to 45.3 per cent. with total white count of 15,000 in a patient suffering with carcinomatosis, the result of primary uterine cancer. The red-blood corpuscles were 4,700,000, the hemoglobin 60 per cent. No nucleated red cells were found in the blood. Neither clinical study nor autopsy revealed any of the usual causes of esoinophilia. There were metastases in the sternum, and the marrow here was loaded with eosinophile cells. In a case of lymphogranulomatosis (Paltauf-Sternberg), an eosinophilia of 42.6 per cent. with total white count of 28,900 was observed. In this case there was a marked anemia, the red cells numbering 1,890,000, hemoglobin 35 per cent. A few erythroblasts were found. Autopsy showed great enlargement of the glands of the left side of the neck, also of the mediastinal, retroperitoneal, mesenteric and inguinal regions, with metastases the size of a bean to that of a cherry in spleen, liver, right adrenal, and bone-marrow. An excess of eosinophiles was found only in the bone-marrow.

On the Absorption Spectrum of Phenolphthalein.—B. Bardach (*Wien. klin. Woch.*, 1913, xxvi, 141) has found that phenolphthalein in the urine, in amounts such as may occur after the administration of the drug as a laxative, may give rise to a single rather broad band in the spectrum situated about midway between D and E. As little as 0.004 gm. per liter of urine may give rise to the spectrum. In examining for the band, 0.5 c.c. of 15 per cent. sodium hydrate is added to 10 c.c. of urine. This is placed in a test tube 3 cm. in diameter and examined. The specimen should be examined while fresh, as the dye may disappear after a short exposure to the air. It is apparent that very small amounts of phenolphthalein may be detected in the urine—so small, in fact, that the color of the drug cannot be detected in the presence of the urinary pigments. The spectrum of phenolphthalein should be borne in mind in examining the urine for blood or urobilin. Reduced hemoglobin has a very similar spectrum. To differentiate